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**From:** Hamilton, John (IHS/PHX) [John.Hamilton@ihs.gov]  
**Sent:** 7/11/2013 8:52:54 PM  
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**Subject:** Summary of Wednesday, July 10, 2013 Monthly Call - Hopi Water Infrastructure Projects

The next monthly water infrastructure call is scheduled for Wednesday, August 7, 2013 at 12:30 PM, Hopi time. Bessie will email the agenda and call-in phone number.

**Participants:**

Upper Moenkopi ... Gov. Sam Shingoitewa and Randy Wolff  
Sipaulovi ... King Honani Sr., Maysa Natoni and Patrick Thompson  
Shungopavi ... Leslie Nasingoetewa and Christine Tawahongva  
Hopi Tribe ... Yvonne Day  
Consultants ... Lynette Polari, Mike Janes and Kerry Brough  
IHS ... Brad Rae, Josh Van Vleet, Adam Hughes, Krista Beyer, Marcus Felter and Robert Lorenz  
BIA ... Eldine Stevens, Wendell Honanie, Rex Wahl (OFMC)  
USDA ... Mike Luecker and Loretta Orona  
USEPA ... Bessie Lee, Susanne Perkins and John Hamilton

**Hopi Arsenic Mitigation Project (HAMP):**

Well Drilling Well drilling is underway and the driller, Yellow Jacket, had drilled the first pilot hole to a depth of -1600 feet as of Tuesday. If there are no unusual drilling problems, the pilot hole should be drilled to a maximum planned depth of -2505 feet by Friday. After completing the pilot hole drilling, water samples will be collected from an estimated 4 zones and tested for a full range of water quality parameters. Results of water quality tests should be available in about a month.

Bessie forwarded a list of recommended constituents and the Hopi Tribe's Water Resources Program may have additional requirements? If the water quality tests shows acceptable quality water, the pilot hole will be reamed and casing and well screens will be installed. Then well development and test pumping will be conducted to determine the yield of the well. This first well may be finished by September, and the two wells in about 5 months.

BIA Participation HQ Indian Affairs (IA) is considering whether BIA/BIE could support moving forward with connections to the HAMP for the three BIA operated water systems serving Keams Canyon, the Jr/Sr High School and Second Mesa Day School. The BIA representatives on the call were not aware of any agency decision to commit to connect to the HAMP. We understand, Bill Bettenberg and Tribal leadership hope to have a decision within a month. Rex mentioned the water pressure at Low Mountain, where the HAMP would connect to the BIA Keams Canyon water system is approximately 300 psi, as a result of boosting pressure to the Agency, which is at a higher elevation.

Environmental Assessment IHS is drafting a contract modification for the BHI-Marron consulting contract to include HAMP connections and service to BIA/BIE as alternative D. The scope of work will be forwarded to BIA, along with an estimated cost, to determine if the Bureau is interested in joining the process. Rex Wahl stated BIA's commitment to participate, and offered to assist in the 404 permitting process. Although the final routes for proposed BIA/BIE connections have not been determined, it's likely two 404 jurisdictional washes will be crossed, including Keams Canyon Wash and Polacca Wash. This may add significantly to the cost of the EA?

USDA-RD Application USDA has provided comments on the draft PER, Strategic Plan and EA, and IHS is revising the documents to include a capital cost and operating cost comparison of alternatives comparing HAMP with arsenic treatment in each village. IHS engineers met with USDA Wednesday, July 10 to review detailed questions on completing the documents with emphasis on the benefit cost analysis, operating costs, customer water rates, water usage and system sustainability in the villages and for the BIA/BIE public water systems. IHS will need to work closely with both BIA and the villages to collect user information, population, water production, utility budgets and collections, and subsidies or other sources of income for the water utilities. This local income and water expense information will be helpful in determining which arsenic mitigation measure is most cost effective in the long-term and it will be included in the PER, as appropriate. King mentioned that village members are very interested in water rates and whether the HAMP related costs will increase rates significantly? There were representatives of two villages on this call, it would be good to promote more outreach and participation in this planning process. IHS will continue to work closely with village CSA's throughout this planning process.

HAMP Engineering The elevated water storage tank planned for the area near the proposed wells has been eliminated, since First Mesa has decided to provide water to the villages on the mesa by pumping, instead of through gravity flow from this tank. There was concern about installing the waterline in the road to the top of the mesa, because of both slope stability and cultural impacts. EPA funded a project that will replace the waterline to the top of the mesa and the booster pumping station while planning for this project continues. The elevated tank will be replaced by two ground level tanks of equal total volume at a new location to the southwest of the wells. This change will reduce the tank cost significantly, since construction of elevated tanks is much more expensive than ground level tanks. In addition, the new pipeline route will be about 6000 LF less than the previous route to the elevated tank site, which was located on a hill.

Cultural Center Leslie asked if the arsenic levels for the Cultural Center water system exceed the MCL? Bessie reported more arsenic sampling is planned, but historically the system has been below 10 ppb.

IHS Project Manager Josh Van Vleet, the IHS project manager for the HAMP project transfers to Reno on Friday. Adam Hughes is the new project manager. He can be reached at the Eastern Arizona District Office in Pinetop, 928-537-0578.

HUD CDBG Application IHS engineers worked with Sipaulovi to complete an application for HUD block grant funding of water system improvements that include a portion of the pipelines planned for the HAMP. There is no word yet from HUD regarding whether this application may be funded.

### **Shungopavi Projects:**

Water Improvement Project Schaum completed the radio telemetry installation, which will sense water levels in the elevated water storage tank to control the well pump, located about 1 mile from the tank. Unfortunately, there are equipment issues, so the contractor will return to correct.

HAMP Waterline Extension The EPA grant to fund a 2000 LF extension of the Shungopavi water system north along SR 264, which was funded with funds remaining in the above project, has been approved by EPA. IHS is drafting a Project Summary and MOA and they will talk to Lionel about the amount of funds available.

CSA Micah Lomaomvaya has been selected as the new Shungopavi CSA.

### **Upper Moenkopi Water and Wastewater:**

Wastewater Treatment Plant The sand filter media has been replaced on one filter and work is underway on the second filter. In general, the wastewater treatment plant is being operated in compliance with the NPDES discharge permit. Previous Discharge Monitoring Reports (DMRs) are still needed, and Kerry has been asked to assist with completion of the reports. GHD's operator, Notah, is doing the current plant sampling. Upon delivery of samples to the lab, he learned that duplicate samples had been collected by one of the operators. Randy will assure that everyone understands that Notah is doing the sampling. With recent operator turnover, the current operators are Fred and Jason.

Utility Management While there is no apparent progress with reformulation of the MUA Board, or the organization's business functions, MDC has a new Board consisting of Willie Moore, Linda Honanie, Leroy Sakiestewa and Alan Numkema. Since the WWTP has been out of compliance, and MDC is the primary operator (but not the permit holder), the Board will need to learn about the plant operation.

Utility Operators David Jensen resigned and Kee Brown is no longer an operator. Bennett J. and Jason W. are operating the RO water treatment plant, with assistance from Notah. RCAC lost Jay Charnholm, so David Wallace and Pablo Figueroa are backstopping from long distances. IHS is working with ITCA to arrange for a contractor that will provide operator training. Sam and Randy are considering taking operator training and they may attend a ADEQ sponsored water operations course planned for July 30-Aug 1 in Flagstaff. Information on this course is available on ADEQ's website.

Water System The RO water treatment plant is now being operated as much as possible to help meet summer demand, but the village has not been able to keep the water storage tanks full. At the RO treatment plant, there is a problem with backwash cycle operating spontaneously and Kerry will troubleshoot next week if possible. Brad sized a new disinfection pump and will help with the installation and training of the operators next Wednesday.

New Water Storage Tank Eddie C. is responsible for completion of the pipeline drawings and the excavation for the ring wall and tank pad. The tank contractor has been nonresponsive regarding when they would start construction of the tank, although Randy hopes it will be completed before September 1.

Community Water Meters The village plans to start reading water meters on July 15 to establish baseline usage. Billing based on meter reading may come at a later date. Ronalyn had developed a list of about 224 residential customers and provided the list to Kerry. GHD will forward the customer list to Randy and Brad, and hopefully it can be used to populate an Excel spreadsheet that will be used for tracking water usage, and for billing later. Brad will provide a simple spreadsheet for this purpose. Work on installing the last 15 residential meters awaits repair of the backhoe. BIA school staff housing may also need either a master meter or individual water meters.

John Hamilton, PE  
EPA Engineering Consultant